AMENDMENTS TO SPECIFICATION

Page 1, line 1:

The present invention relates to speakers of electronic ~~device~~ devices and more particularly to a system for automatically performing a frequency response equalization tuning on a speaker of an electronic device.

Page 1, lines 10-17:

As ~~times revolves~~ time has passed, especially in recent decades, the progress of technology has been significant. As a result, more and more people ~~involve~~ are involved in a bustling daily life. For increasing work efficiency and improving living ~~standard~~ standards, various electronic devices have been developed such as the electronic dictionary, electronic book, personal digital assistant (PDA), mobile phone, etc. And in turn, more and more people rely on such electronic devices in their daily life and the devices have even become an indispensable part in some ~~people'~~ people's daily life. Hence, having a high quality electronic device has become a common requirement among users.

Page 1, line 18 to Page 2, line 1:

Moreover, an electronic dictionary, electronic notebook, PDA, mobile phone, etc. can provide necessary information to people for facilitating work and/or daily life. In each of the above devices, an embedded speaker is operative to amplify sound therefrom. Hence, a good speaker is closely related to the sound quality of the electronic device. In view of this, current electronic device manufacturers always perform a frequency response matching on an installed speaker in the electronic device so as to obtain an optimum sound effect from the generated frequency response of the speaker. Also, an optimum gain of the speaker may be obtained by tuning resistance and capacitance of a coupled equalizer so as to effectively correct the output frequency response of the speaker. As a result, an optimum sound is generated in an audible frequency range of 20Hz ~~and~~ to 20KHz.

Page 2, lines 2-19:

Typically, an equalization tuning on a speaker installed in an electronic device is first performed by testing output sound of one of a plurality of different sampling frequencies by a test instrument. Then ~~manually tune~~ the resistance and capacitance of a coupled equalizer are repeatedly manually tuned until an optimum frequency response output is obtained from the speaker. However, the previous technique suffered from several disadvantages. For example, it is tedious, time consuming, and laborious. Further, the above tedious tuning process has to be done again after the used speaker is replaced by a new one. And in turn the technician may get tired of this, resulting in ~~a~~ poor tuning and quality. ~~Above~~ The above facts really bother electronic device manufacturers. Recently, a digital equalizer ~~is~~ has been employed to solve the above problems by some electronic device manufacturers. However, an equalization tuning on a speaker installed in an electronic device is still first performed by testing output sound of one of a plurality of different sampling frequencies by a test instrument. Then ~~input~~ the obtained gain to be tuned is input into the digital equalizer for obtaining an optimum output frequency response of the speaker. By utilizing this, the above tedious tuning process is still not improved. To the ~~worse~~ contrary, the above tedious tuning process has to be done again after the used speaker is replaced by anew one, resulting in a waste of labor and time. Thus a need for improvement exists.

Page 4, line 21 to Page 5, line 2:

In the invention, a software installed in CPU 20 performs a frequency response compensation on speaker 10 in an electronic device ~~in~~ by performing the following steps as shown in the flow chart of FIG. 2. Firstly, the electronic device is required to ~~design~~ be designed with an ideal frequency response data in an audible frequency range of 20Hz ~~and~~ to 20KHz based on the specifications of the speaker 10 to be installed. In FIG. 3, there is shown a frequency response graph of ~~an~~ ideal frequency response data. Such data is stored in a memory of the electronic device. ~~A standard~~ Standard sound data in an audible frequency range of 20Hz ~~and~~ to 20KHz is stored in the memory as shown in FIG. 4, the frequency response graph of ~~a~~ the standard sound data.

Page 5, lines 3-12:

After speaker 10 is installed in the electronic device, the power of the electronic device is then turned on. As shown in FIG. 2 again, CPU 20 reads the standard sound data from memory. Then CPU 20 sends it to sound control circuit 30 for generating a standard sound signal therein based on the standard sound data. Then digital equalizer 40 may compensate it based on a predetermined initial gain. The compensated sound signal is further sent to speaker 10. Once microphone 50 receives the compensated sound signal it will instruct sound control circuit 30 to convert the sound signal into ~~a~~ digital sound data as shown in FIG. 5, the frequency response graph of ~~a~~ the digital sound data.

Page 5, line 24 to Page 6, line 7:

In brief, after speaker 10 is installed in an electronic device, the power of the electronic device is then turned on. By utilizing the invention, it is possible ~~of~~ to automatically ~~detecting~~ detect and ~~calculating~~ calculate equalization tuning gains in the audible frequency range of 20Hz ~~and~~ to 20KHz. Hence, digital equalizer 40 may automatically perform a frequency response tuning on the speaker 10. In view of the above, in the electronic device of the invention after the installation of the speaker, a technician does not have to perform a tedious testing process on the output sound of one of a plurality of different sampling frequencies by a test instrument. Or does the technician have to manually tune resistance and capacitance of a coupled equalizer repeatedly. To the contrary, the invention can tune the output sound signals of the speaker to an optimum frequency response state.